UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF RESEARCH AND DEVELOPMENT
NATIONAL EXPOSURE RESEARCH LABORATORY
RESEARCH TRIANGLE PARK, NC 27711

August 21,2017

MEMORANDUM

SUBJECT: Laboratory PFAS Results for NC DEQ Cape Fear Watershed Sampling: Week 6 & 7 GenX Analysis

FROM: for Timothy J. Buckley, Director
Exposure Methods and Measurements Division

THRU: for Jennifer Orme-Zavaleta, Director
National Exposure Research Laboratory

TO: Linda Culpepper, Deputy Director
Division of Water Resources
North Carolina Department of Environmental Quality

Enclosed please find our third report of PFAS concentrations in Cape Fear River water samples collected under the direction of NC DEQ. This report includes results for GenX from weeks 6 & 7 sampling.

We look forward to meeting with you in person at our laboratory in Research Triangle Park to go over these results and answer any questions that you might have. When we meet in person, we are also planning to provide you with preliminary findings from our non-targeted analysis which require a bit more explanation.

Thank you for inviting us to be a part of this effort that addresses a very important public health concern in North Carolina. These results represent the effort of many within our lab but I would especially like to acknowledge Drs. Mark Strynar, Andy Lindstrom, James McCord, and Seth Newton in conducting the laboratory analyses, Dr. Myriam Medina-Vera who provided invaluable support and coordination, and Ms. Sania Tong-Argao who supported and oversaw quality assurance.

If you have any questions or concerns, do not hesitate to contact me at (919) 541-2454 or email buckley.timothy@epa.gov. I look forward to our continued work together.

Enclosure

CC: Becky B. Allenbach, USEPA Region 4
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Executive Summary

The week 6 & 7 GenX results were received by our lab on July 28, 2017 for week 6, and August 1, and 4, 2017 for week 7, respectively. Results show that GenX concentrations throughout the river basin continue their decline starting with the Chemours outfall (week 7 maximum of 67.9 ng/L) and extending downstream to finished drinking water (maximum at Pender Co. finished water week 7 of 43.4 ng/L). Our QA/QC samples for these results are within expected tolerances (i.e. undetected in blanks and spiked samples within 20% of expected concentrations) with one exception: a high-level spike (200 ng/L) measured at 149 ng/L in week 6 which was outside our ±20 percent range. The GenX results are provided in Attachment A.

Attachment A: Concentration of GenX Measured in Cape Fear Watershed Samples

		Conc.	Flag
Week	Location / Sample Identifier	(ng/L)	
6	DWR #1- PO Hoffer WTP Raw Water	<10	1
6	DWR #2 - Bladen Bluffs Raw water (avg. 2 reps)	30.4	
6	DWR #3 - Bladen Bluffs Finished water	34.2	
6	DWR #4 - Smithfield Field Well	<10	1
6	NCDEQ 1 - LCFWSA Raw	35.1	
6	NCDEQ 2 - Sweeney Treated	69.5	
6	NCDEQ 3 - ASR Well	53.6	
6	NCDEQ 4 - WB Well 11	19.2	
6	NCDEQ 5 - IP-Raw	36.3	
6	NCDEQ 6 - IP-Finished	22.2	
6	NCDEQ 7 - NW Brunswick WTP - Finished	31.2	
6	NCDEQ 8 - Pender 421 WTP Finished	65.4	
6	NCDEQ 9 - WB Well 6	<10	1
6	NCDEQ 10 - CB Well 8	<10	1
6	NCDEQ 11 - CB Well 13	<10	1
6	Chemours Outfall 002 7-24-17	102	
6	Chemours Outfall 002 7-25-17 (avg. 2 reps)	74.6	
6	Chemours Outfall 002 7-26-17	71.3	
6	Chemours Outfall 002 7-27-17	77.1	
6	Chemours Outfall 002 7-28-17	63.4	
7	(2) Sweeney WTP finished	38.3	
7	(6) IP WTP Finished	12.7	
7	(7) NW Brunswick Finished	21.6	
7	(8) Pender 421 WTP Finished	39.2	
7	Pender Co. Finished water 7-31-17	43.4	
7	Chemours outfall 002 7-31-17	67.9	
7	Bladen Bluffs WTP Finished	36.2	
7	Chemours outfall 002 8-1-17	35.1	
7	Chemours outfall 002 8-2-17	41.9	
7	Chemours outfall 002 8-3-17	61.8	
7	Chemours outfall 002 8-4-17	44.0	
Flag			
1	Below Limit of Quantitation		